

Claims:

1. A battery charger assembly, comprising:

a housing having a battery receiving cavity, said cavity being profiled to receive at least a battery therein, said housing further comprising an opening through said housing and into said cavity;

electrodes for contacting contacts on the battery for charging the battery; and

a gripping member movable transversely into and out of said housing opening, between a locked and unlocked position, for gripping a battery placed within said cavity.

2. The battery charger assembly of claim 1, wherein said gripping member is moved by a cam assembly.

3. The battery charger assembly of claim 2, wherein said gripping member is comprised of a gripper portion attached to an insert.

4. The battery charger assembly of claim 3, wherein said cam assembly is comprised of a rotatable cam which operates within a follower groove in said insert.

5. The battery charger assembly of claim 3, wherein said gripper member is a rubber-like material molded to a plastic insert.

6. The battery charger assembly of claim 5, wherein said gripper member is substantially U-shaped, with leg portions of the U flanking said insert, and the closed end of the U providing the gripping function.

7. The battery charger assembly of claim 6, wherein the leg portions of gripper member are fixed to the housing portion, and the movement of the cam stretches the remainder of the gripper member.

8. The battery charger assembly of claim 4, wherein said rotatable cam and said follower groove are contoured for a nested position when in the unlocked position.

9. The battery charger assembly of claim 4, wherein said rotatable cam and said follower groove are contoured for a detented position when in the locked position.

10. The battery charger assembly of claim 1, wherein said battery receiving cavity is profiled to receive a battery alone, or a battery connected to its hand-held appliance.

11. The battery charger assembly of claim 10, wherein said cavity includes guides along the insertion axis of the cavity for holding the battery alone.

12. The battery charger assembly of claim 11, wherein said guides are comprised of guide grooves along the insertion axis of the cavity, and are profiled to receive ribs along an exterior of a battery.

13. A battery charger assembly, comprising:

a housing having a battery receiving cavity, said cavity being profiled to receive a battery therein alone, or a battery and its appliance therein, said housing further comprising an opening through said housing and into said cavity;

electrodes for contacting contacts on the battery for charging the battery; and

a cam operated gripping member movable transversely into and out of said housing opening, between a

locked and unlocked position, for gripping a battery placed within said cavity.

14. The battery charger assembly of claim 13, wherein said cam operated gripping member is comprised of a gripper portion attached to an insert.

15. The battery charger assembly of claim 14, wherein said cam operated gripping assembly is comprised of a rotatable cam which operates within a follower groove in said insert.

16. The battery charger assembly of claim 14, wherein said gripper member is a rubber-like material molded to a plastic insert.

17. The battery charger assembly of claim 16, wherein said gripper member is substantially U-shaped, with leg portions of the U flanking said insert, and the closed end of the U providing the gripping function.

18. The battery charger assembly of claim 17, wherein the leg portions of gripper member are fixed to the housing portion, and the movement of the cam stretches the remainder of the gripper member.

19. The battery charger assembly of claim 16, wherein said rotatable cam and said follower groove are contoured for a nested position when in the unlocked position.

20. The battery charger assembly of claim 16, wherein said rotatable cam and said follower groove are contoured for a detented position when in the locked position.

21. The battery charger assembly of claim 15, wherein said cam member is operated by a shaft which is connected to said cam member, and extends through to an exterior of said housing.

22. The battery charger assembly of claim 13, wherein said cavity includes guides along the insertion axis of the cavity for holding the battery alone.

23. The battery charger assembly of claim 22, wherein said guides are comprised of guide grooves along the insertion axis of the cavity, and are profiled to receive ribs along an exterior of a battery.